

Population Formulas

3.1.2 Calculate and explain, from given data, the values of crude birth rate, crude death rate, fertility, doubling time, and natural increase rate.

CRUDE BIRTH RATE (CBR) $\rightarrow \frac{\# \text{ of births}}{\text{Total population}} \times 1,000$

CRUDE DEATH RATE (CDR) $\rightarrow \frac{\# \text{ of deaths}}{\text{Total population}} \times 1,000$

NATURAL INCREASE RATE (NIR) $\rightarrow \% \text{ natural increase} = \frac{(CBR - CDR)}{10}$

FERTILITY \rightarrow FERTILITY RATE $\rightarrow \frac{\text{Avg. \# of births}}{\# \text{ of childbearing age}}$

\rightarrow TOTAL FERTILITY RATE $\rightarrow \frac{\text{Avg. \# of children}}{\# \text{ has in her lifetime}}$

DOUBLING TIME $\rightarrow 70 / NIR$